

**ALBA****Model R22 'Diplomat'**

**General Description:** A two-track two-speed tape recorder for use on A.C. mains or internal batteries. Features include recording level and battery condition indicated by moving coil meter. Reel size accepted is 5 in.

Mains Supply: 115/230 volts, 50-60 Hz.

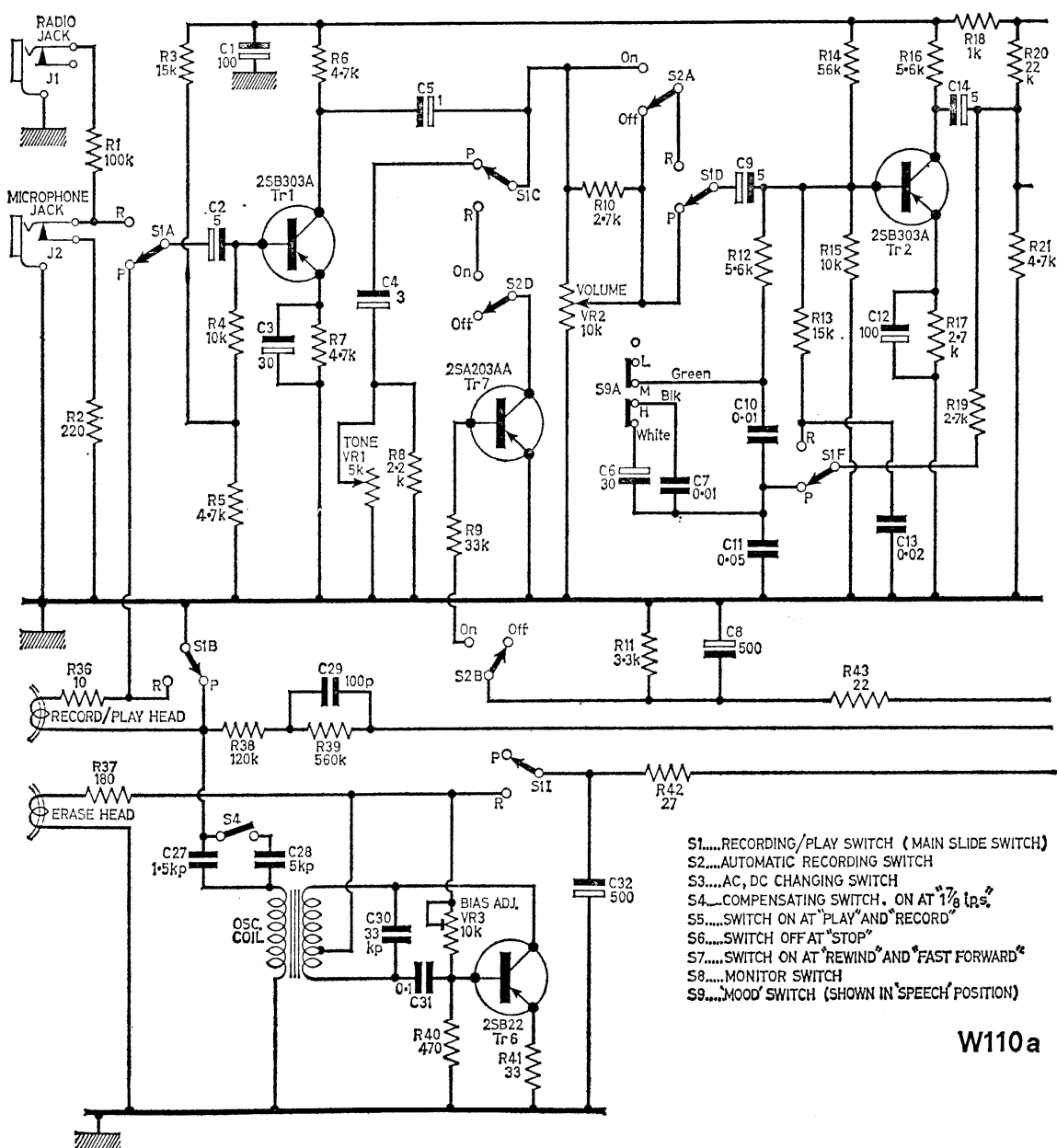
Batteries: 9 volts ( $6 \times 1.5$  V).

Tape Speeds:  $3\frac{3}{4}$  and  $1\frac{7}{8}$  i.p.s.

Input Impedances: Radio (J1) 8  $\Omega$ ; Microphone (J2) 3 k $\Omega$ .

Output Impedance: 8  $\Omega$ .

Erase System: D.C.



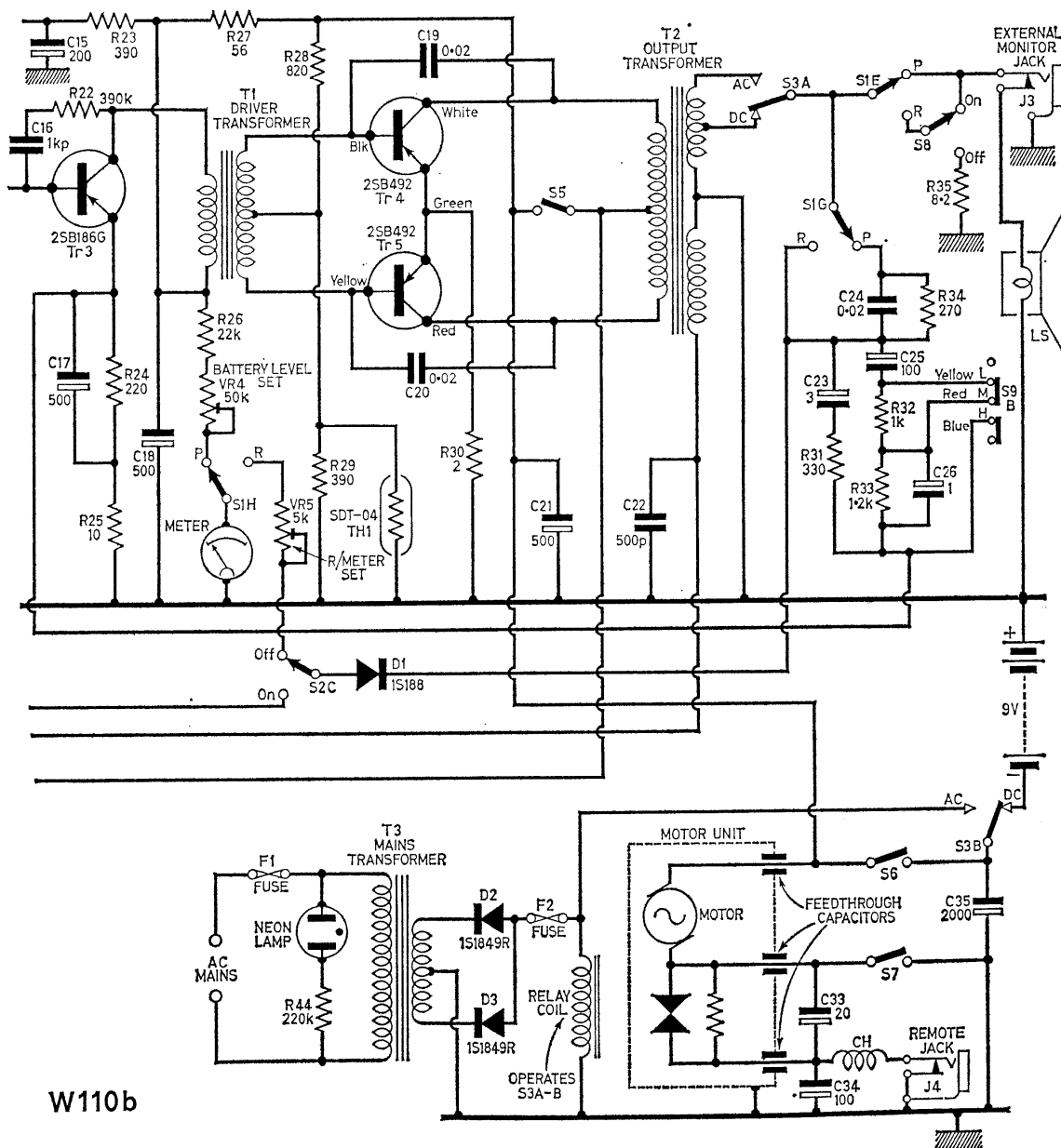
(W110a) CIRCUIT DIAGRAM—MODEL R22 "Diplomat" (Part)

## Electrical Adjustments

**Battery Level Adjustment:** Connect 6.5 V to the battery terminals and switch the tape recorder to Play. Adjust the pre-set control VR<sub>4</sub> to obtain a zero deflection when the volume control is at minimum.

**Recording Bias:** Connect valve voltmeter across R<sub>36</sub>. Switch tape recorder to Record. Then adjust the pre-set VR<sub>3</sub> to obtain a reading of 8mV on the valve voltmeter.

**Recording Level Adjustment:** Connect audio oscillator (high impedance output) to the Microphone input socket. Switch the tape recorder to Record and turn volume control to maximum. Inject a signal of 1 kHz at 1 V, attenu-



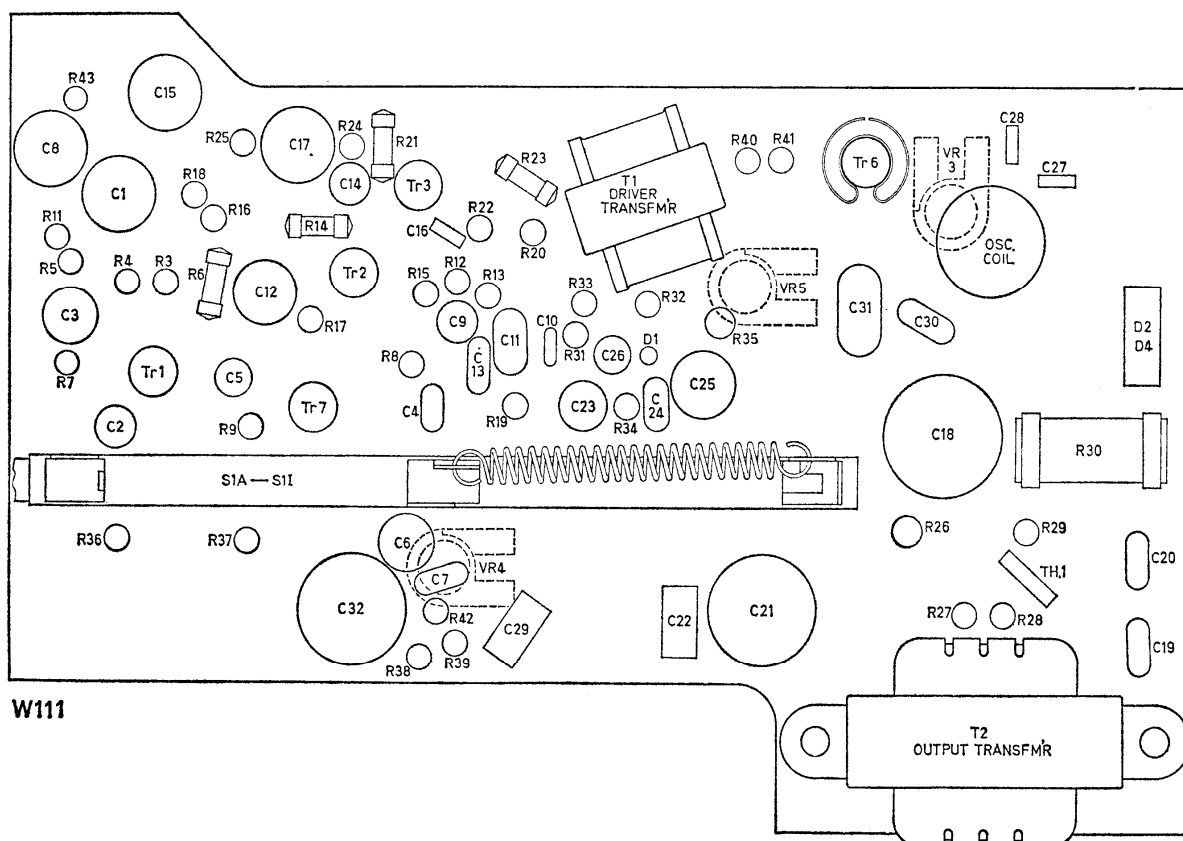
(W110b) CIRCUIT DIAGRAM—MODEL R22 "Diplomat" (Continued)

# TAPE RECORDER SERVICING

ated to  $-70\text{dB}$ , and adjust pre-set  $\text{VR}_5$  to obtain zero indication on the VU meter.

PLAYBACK VOLTAGES				RECORDING VOLTAGES			
	Collector	Base	Emitter		Collector	Base	Emitter
TR <sub>1</sub>	5.1	1.1	1.5	TR <sub>1</sub>	4.9	1.07	1.45
TR <sub>2</sub>	4.5	0.77	0.88	TR <sub>2</sub>	4.0	0.87	0.95
TR <sub>3</sub>	8.1	1.25	1.27	TR <sub>3</sub>	7.8	1.17	1.17
TR <sub>4</sub>	9.1	0.15	0.2	TR <sub>4</sub>	8.7	0.15	0.19
TR <sub>5</sub>	9.1	0.15	0.2	TR <sub>5</sub>	8.7	0.15	0.19
				TR <sub>6</sub>	8.2	0.75	1.0
				TR <sub>7</sub>	—	0.07*	—

Voltage from external monitor jack (playback) and monitor output, 0.78 (Recording). Readings obtained with volume control and tone (playback) at maximum, ALC in Off position, monitor switch in On position, except where indicated (\*) = ALC switched on.



(W111) COMPONENT LAYOUT—MODEL R22 "Diplomat"